

WHAT IS CLAIMED IS:

1. A magnetic recording and reproduction apparatus, comprising:

a rotatable head cylinder for recording information to, and/or reproducing information from, a magnetic tape;

a tape pull-out member for pulling out the magnetic tape; and

a guide member for guiding the tape pull-out member; wherein:

the tape pull-out member is engaged with a groove formed in the guide member;

the tape pull-out member is movable between a first position and a second position along the groove;

the first position is a position at which information recording to, and information reproduction from, the magnetic tape is possible;

the second position is a position at which information recording to, and information reproduction from, the magnetic tape is impossible;

the rotatable head cylinder is provided on a cylinder holding member integrally formed with the guide member; and

a profile of the groove is continuous with no gap.

2. A magnetic recording and reproduction apparatus for performing information recording to, and/or information reproduction from, a tape which is run after being pulled out from a tape cassette and wound around a rotatable head cylinder, the magnetic recording and reproduction apparatus comprising:

a tape pull-out member which is located in an opening of the tape cassette in a cassette mountable state, and,

while moving toward a tape pull-out completion position in the vicinity of the rotatable head cylinder, pulls out the tape from the tape cassette and winds the tape around the rotatable head cylinder, so as to place the magnetic recording and reproduction apparatus into a tape pull-out completion state; where the cassette mountable state is a state of the magnetic recording and reproduction apparatus in which the tape cassette can be mounted thereon, and the tape pull-out completion state is a state of the magnetic recording and reproduction apparatus in which the tape has been pulled out from the tape cassette and wound around the rotatable head cylinder such that the tape is capable of running;

a boss portion included in the tape pull-out member;

and

a guide member for guiding the tape pull-out member such that the tape pull-out member is reciprocally movable between the opening in the tape cassette and the tape pull-out completion position;

wherein:

the tape pull-out member is movable on a top surface of the guide member;

the guide member has a groove which is engaged with the boss portion; and

a profile of the groove is continuous with no gap.

3. A magnetic recording and reproduction apparatus for performing information recording to, and/or information reproduction from, a tape which is run after being pulled out from a tape cassette and wound around a rotatable head cylinder, the magnetic recording and reproduction apparatus comprising:

a tape pull-out member which is located in an opening of the tape cassette in a cassette mountable state, and,

while moving toward a tape pull-out completion position in the vicinity of the rotatable head cylinder, pulls out the tape from the tape cassette and winds the tape around the rotatable head cylinder, so as to place the magnetic recording and reproduction apparatus into a tape pull-out completion state; where the cassette mountable state is a state of the magnetic recording and reproduction apparatus in which the tape cassette can be mounted thereon, and the tape pull-out completion state is a state of the magnetic recording and reproduction apparatus in which the tape has been pulled out from the tape cassette and wound around the rotatable head cylinder such that the tape is capable of running;

a guide member for guiding the tape pull-out member such that the tape pull-out member is reciprocally movable between the opening in the tape cassette and the tape pull-out completion position; and

a cylinder holding member having the rotatable head cylinder provided thereon, the cylinder holding member being integrally formed with the guide member.

4. A magnetic recording and reproduction apparatus according to claim 3, wherein the cylinder holding member and the guide member include at least one resin selected from the group consisting of PPS (polyphenylene sulfide), PES (polyether sulfone), PEI (polyetherimide), PC (polycarbonate), PA (polyamide), PI (polyimide), PBT (polybutyleneterephthalate), PPE (denatured polyphenylene ether), LCP (liquid crystal polymer), and PEEK (polyetheretherketone).

5. A magnetic recording and reproduction apparatus according to claim 4, further comprising a positioning section for positioning the tape pull-out member at the tape pull-out

completion position;

wherein the positioning section, the guide member and the cylinder holding member are integrally formed together.

6. A magnetic recording and reproduction apparatus according to claim 2, further comprising a cylinder holding member having the rotatable head cylinder provided thereon, the cylinder holding member being integrally formed with the guide member;

wherein the cylinder holding member and the guide member include at least one resin selected from the group consisting of PPS (polyphenylene sulfide), PES (polyether sulfone), PEI (polyetherimide), PC (polycarbonate), PA (polyamide), PI (polyimide), PBT (polybutyleneterephthalate), PPE (denatured polyphenylene ether), LCP (liquid crystal polymer), and PEEK (polyetheretherketone).

7. A magnetic recording and reproduction apparatus according to claim 2, further comprising:

a cylinder holding member having the rotatable head cylinder provided thereon; and

a positioning section for positioning the tape pull-out member at the tape pull-out completion position;

wherein the cylinder holding member, the guide member and the positioning member are integrally formed together.

8. A magnetic recording and reproduction apparatus according to claim 7, wherein:

the boss portion has a stepped portion;

the tape pull-out member includes a U-shaped boat plate;

- 32 -

P33641

the boss portion has a pivotable boat driving member;
the boat driving member is provided between the
stepped portion and the boat plate; and

the magnetic recording and reproduction apparatus
is assembled such that the tape pull-out member is movable
relative to the guide member by inserting the boss portion
into the groove, engaging the boat driving member with the
boss portion; and then elastically deforming the boat plate
and engaging the boat plate with the stepped portion.